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13. SUPPLEMENTARY NOTES

14. ABSTRACT-The training grant has two goals. The first goal is to integrate the students from Hampton University (HU) into the Prostate Center through research, lectures, seminars, and clinical exposure. The second goal is to attract talented HU students into the graduate prostate cancer program at GU. To achieve these goals, the training program is divided into two parts. Part I (8-12 weeks) consists of a mentored summer research experience at GU in the laboratory of a training faculty and attendance of lectures, seminars, and journal club. Attendance on clinical rounds and at clinical conferences on prostate cancer allows the trainees to follow prostate cancer patients through treatment. In addition, the trainees attend the weekly graduate school preparation session and are scheduled to take the GRE general and subject tests. During the academic year, part II consists of an educational and research component that enhances the prostate cancer training of the students through enrollment in HU BIO408 – Research Problems. During the third year of funding, four students from HU conducted research on the mechanism of action of novel drugs that sensitize prostate tumors to radiation treatment; on the role of BRCA1 and oxidative stress in prostate cancer; on the role of the hippo-yap pathway in the proliferation of prostate cancer; and on the metabolomic profile of prostate cancer. The students are currently enrolled in the Research Problems course and scheduled to take the GRE exam.

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INTRODUCTION

The Lombardi Cancer Center (LCC) at Georgetown University (GU) is a National Cancer Institute designated Comprehensive Cancer Center. The Prostate Center at LCC is a multidisciplinary clinic where physicians and scientists interact to advance state-of-the-art treatment of patients with the goal of curing prostate cancer and maximizing quality of life. Urological surgeons, radiation oncologists, population scientists, medical oncologists, patient advocates, and basic scientist work together to develop clinical protocols that translate laboratory and technical discoveries to the clinic. Scientists at the Prostate Center are working to discover the molecular causes of prostate cancer and the population-wide impact of the disease. Their research is grouped into several thematic areas including prevention, detection and diagnosis, advancing treatment, and survivorship. Hampton University (HU), founded in 1869, is a dynamic, progressive institution of higher education that is a privately endowed, non-profit, non-sectarian, co-educational, historically black university. The Department of Biological Sciences has over 400 students and offers both the B.Sc and M.Sc. degrees. The Department is second among HBCU's in the number of B.Sc. degrees granted and is ranked nineteenth among all schools in the U.S. The Department boasts a 100% retention rate.

BODY

The training grant has two goals. The first goal is to integrate the students from Hampton University (HU) into the Prostate Center through research, lectures, seminars, and clinical exposure. The second goal is to attract talented HU students into the graduate prostate cancer program at GU. To achieve these goals, the training program is divided into two parts. Part I (8-12 weeks) consists of a mentored summer research experience at GU in the laboratory of a training faculty and attendance of lectures, seminars, and journal club that provides a comprehensive scientific foundation in prevention,

etiology, and initiation of prostate cancer through the progression and metastasis of the disease. Attendance on clinical rounds and at clinical conferences on prostate cancer allows the trainees to follow prostate cancer patients through treatment. In addition, the trainees attend the weekly graduate school preparation session and are scheduled to take the GRE general and subject tests. During the academic year, part II consists of an educational and research component that enhances the prostate cancer training of the students through enrollment in HU BIO408 – Research Problems. This class consists of seminars/lectures given, in part, by the GU training faculty. In addition, the HU faculty oversee a prostate cancer research project that addresses the epidemiological link between environmental exposures and an increased risk of developing prostate cancer.

ACCOMPLISHMENTS September 2011 to September 2012

Aim – Foster collaborations between Georgetown University and Hampton University that will lead to the recruitment of Hampton University undergraduate students into the prostate cancer training program at Georgetown University Medical Center.

Three of the Hampton University are or were enrolled in the graduate program at Georgetown University.

Task 1. Recruitment of Hampton University undergraduate students:

A. Recruitment:

1. Dr. Kenney recruited four second and third year undergraduate students from the Department of Biological Sciences at Hampton University for the summer of 2012. The students included Eugide Othepa, Beverly Uweh, Reena Blade, and Emmen Udoh.

B. Selection:

1. The students were selected based on their research interests, overall and science GPA, and letters of recommendation.

Task 2. Placement of Hampton University undergraduate students in Georgetown University mentor's laboratory:

1. The Deputy Director of Cancer Research Education (Dr. Martin) traveled to Hampton University during the fall of 2011 semester and presented an overview of the prostate cancer research at Georgetown University. Based on their research interest, the Hampton students indentified potential mentors in the GUMC prostate program.

2. Potential Georgetown University mentors were then contacted. Hampton University students were also be given the contact information of undergraduate, graduate, and postdoctoral trainees in the mentor's laboratory and be encouraged to contact the mentor's trainees.

Task 3. Georgetown University provided a summer research and training program for Hampton University undergraduate students:

1. The Hampton University undergraduates (Eugide Othepa, Beverly Uweh, Reena Blade, and Emmen Udoh) conducted prostate cancer research (8 - 12 weeks) in the laboratory of a Georgetown University mentor (Drs. Collins, Yi, Rosen, and Dritshcilo).

2. Hampton University trainees participated in and presented their research at weekly laboratory research data meetings.

3. The trainees attended the weekly Brown Bag Lunch Lecture.

4. The trainees also attended Oncology Grand Rounds, the weekly Oncology Journal Club and Seminar, and the weekly Oncology Faculty Seminar.

5. Trainees attended a weekly graduate school preparation session and are scheduled to take the GRE general and subject tests in the fall of 2012. The trainees from the summer of 2011 (Kara Johnson, Chantel Johnson, Reena Blade, and Emem Udoh) took the tests in the fall of 2011.

Task 4. Georgetown University faculty participated in teaching the Hampton University undergraduate course HU BIO408 – Research Problems:

1. Hampton University undergraduate students who participated in the summer of 2011 enrolled in HU BIO408 Research Problems. Dr. Kenney's HU408 course presented various aspects of clinical and basic cancer research in a lecture format (50 minutes).

Task 5. Hampton University faculty advisor provided prostate cancer research opportunities for the undergraduate trainees:

1. The Hampton University faculty advisor, Dr. Kenney provided in vitro prostate cancer research opportunities during the academic year for the undergraduate trainees via enrollment in HU BIO408 Research Problems.

Task 6. Georgetown University faculty provided continuing prostate cancer summer research opportunities for Hampton University undergraduate trainees:

1. Two of the Hampton students returned the following summer to continue their research projects.

Task 7. Georgetown University will continue to track the career progress of the Hampton University undergraduate students:

1. The career progress of the Hampton University is tracked by the Office of Cancer Research Education of the Lombardi Comprehensive Cancer Center of Georgetown University as illustrated below.

Students as of 2012	**HU-GU Fellow or Volunteer**	**Current Status**
Reena Blade	HU-GU Fellow Summer 2011	Class of 2013
Kara Jordan	HU-GU Fellow Summer 2011	Class of 2012
Chantel Thompson	HU-GU Fellow Summer 2011	Class of 2012
Emmen Udoh	HU-GU Fellow Summer 2011	Class of 2013
Gerald Porter	HU-GU Fellow Summer 2010	Georgetown Graduate Student - Fall 2011
Shayna Whitney	HU-GU Fellow Summer 2010	Class of 2012
Tiffany Lumpkin	HU-GU Fellow Summer 2010	Class of 2012
Zerin Scales	HU-GU Fellow Summer 2010	Class of 2013; Boston Univ. School of Medicine early admittance 2011
Tiffany Taliferro	Volunteer HU-GU Fellow 2010-11; HHMI Fellow; BIO 408 student	Georgetown Graduate Student - Fall 2011
Wenners Ballard	Recruited Chemistry major, Class of 2010	Georgetown Tumor Biology MS - 2011; Howard Medical Student - Fall 2011
Krista Parker	Volunteer HU-GU Fellow; Battelle Scholar 2008-2010; BIO 408 Student	Ohio State Medical Student - Fall 2011
Yampu Freeman	Volunteer HU-GU Fellow 2009	Columbia Graduate Student -Fall 2010
Thomas Boddie	Volunteer HU-GU Fellow 2009; BIO 408 student	Howard Graduate Student - Fall 2011
Nicholas Archie	Volunteer HU-GU Fellow 2010; BIO 408 student	Predental Student Class of 2010
Salim Quinn	Volunteer HU-GU Fellow 2009-2011; BIO 408 student	Hampton Graduate Student - Fall 2011
Whitney Rose	Volunteer HU-GU Fellow 2010; BIO 408 student	Premedical Student Class of 2010

The table above summarizes the accomplishments of Fellows and Volunteers in the program. During the first year of funding, four students from HU conducted research on the mechanism of action of novel drugs on prostate cancer cell growth; on the role of BRCA1 and oxidative stress in

prostate cancer; on the role of RARRES1, a tumor suppressor gene, in prostate cancer; and on the metabolomic profile of prostate cancer. During the second year of funding, four more students conducted research on the effects of radiation on prostate cancer cells, developing target-specific siRNA containing nanoparticles as tumor radiation and chemosensitizers, on the role of PCPH in prostate cancer, and on the mechanisms of radiation and chemotherapeutic resistance in prostate cancer. During the third year of funding, four students from HU conducted research on the mechanism of action of novel drugs that sensitize prostate tumors to radiation treatment; on the role of BRCA1 and oxidative stress in prostate cancer; on the role of the hippo-yap pathway in the proliferation of prostate cancer; and on the metabolomic profile of prostate cancer. Several of the students in the program have gone on to graduate and medical school.